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Examiner Thomson

Serial # 10/648,888

REMARKS/ARGUMENTS***Amendments in General***

1. Earlier claims 1-3 have been canceled.
2. Claims 4- 8 have been added to the application.
3. Claims 4-8 have been written to specifically designate the features of the invention that are not present in the prior art cited by the Examiner. In addition, it is believed that the language of these claims now properly corresponds with the specification of the application as filed, and that these new claims clarify the description of features of the present invention which are not present in the prior art that has been cited by the Examiner.
4. Support for these new claims are found on pages 12-16 of the application as filed. These changes add no new matter to application and acceptance of application in view of these changes is respectfully requested.

Claim Rejections - 35 USC §102

5. The Examiner rejected the previously submitted claims under § 102(b) as being anticipated by both Swan (U.S. Pat. No. 6,499,245) and Morris (U.S. Pat. No. 4,675,224)

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d. 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 828 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). MPEP § 2131.

6. Claims 4-8 of the application are all structurally distinct from and claim features which are not present in the Swan reference. Therefore, Applicant respectfully submits that the Swan reference does not anticipate the present invention.
7. The differences between the present invention and the invention described in the Swan patent can be found by comparing the claim language and the drawings of the claims of the present invention with the device described in claims of Swan patent.

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8. The claims of the present application all require three separate items. A barrel nut, a gas tube and hand guard support ring and a lock nut.

9. The device described in Fig. 18 of the Swan reference does not include all of these features. Fig. 18 of the Swan reference teaches the presence of barrel nut, 170, a delta ring 162, a washer 164 and a spring 163. The Swan reference does not teach the presence of a lock nut as it is described in the present application.

10. Furthermore, the Swan reference fails to teach the inclusion of circumvolving outer grooves along the outer surface of the barrel nut, or that these circumvolving outer grooves are configured to interact with the lock nut.

11. The Swan reference also fails to teach the presence of tabs on the hand support ring which is claimed in the present invention.

12. The Swan reference also fails to teach the presence of holes configured to interact with a tensioning device, or the fact that the locking nut and the barrel nut are generally free from projections which limit the number of locking positions that the barrel nut and the locking nut may have.

13. The prior art such as the Swan and Morris references teach the inclusion of a single one-piece structure 44, 170 that provides both the means for connecting the barrel to the upper receiver of the firearm, as well as a device for supporting the gas tube that is configured to extend along the length of the barrel of the device. This is the sole device that connects the barrel to the upper receiver in the prior art.

14. These prior art barrel nuts are single piece units 170 that contain a single threaded end configured to fit upon the upper receiver end of a firearm and a plurality of projections that extend from this nut 170.

15. A delta ring 162 provides support to the hand guard and is configured to allow the gas tube ring to pass through this ring. This delta ring is configured to fit over the barrel nut 170. However this delta ring 162 has no effect upon the barrel nut which is positioned beneath the delta ring 162. This delta ring 162 has no effect upon the axial rotation of the barrel nut 170. The barrel nut is prevented from axial rotation by the tension created by the repeated tightening of the connection sleeve against the upper receiver of the firearm, and the gas tube that passes between the projections positioned around the outer surface of the prior art barrel nut 170.

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16. The prior art delta ring 162 is held in place by the presence of a spring 163 and the washer or spacer ring 164 which pushes the delta ring over the barrel nut. In use all of these devices are positioned between the upper receiver and the barrel nut.

17. The invention claimed presently is fundamentally different from these devices because the three-piece connection system replaces the single piece barrel nut 170 that is shown in the present invention. The present invention may be used in conjunction with the prior art delta ring 162, the prior art spring 163 and the prior art spacer 164. The present invention connect to the barrel and when in place all extend away from the upper receiver portion of the gun to which the barrel is attached.

18. The present invention includes a barrel nut that is threaded to connect with the upper portion of the receiver of the firearm. The present invention also provides a separate support ring which is configured to independent connection with the barrel nut. This is an important feature compared to the prior art. In the prior art embodiment the barrel nut 170 is one piece and the projections between which the gas tube must extends are fixed to the barrel nut. Therefore, the number of positions into which the barrel nut can be configured is limited by the permanently attached projections that extend from the prior art barrel nut 170.

19. The projections that exist in the prior art barrel nuts define spaces through which the gas tube of the gun must extend. If the gas tube is bent, the air from the barrel cannot be allowed to pass and the gun can jam and malfunction. Therefore, it is essential that the gas tube align with the pre-formed notches in a way that the alignment of the gas tube remains straight.

20. Because the prior art barrel nuts are one piece; therefore in order to align the portion that supports or receives the gas tube, the torque on the threaded portions of the device must be either overly increased or decreased so that the gas tube support sections are properly aligned. This results in a variety of problems including embodiments where the nut is either over tightened and the barrel cannot be removed or embodiments where the barrel fails to stay true and connected. In a combat situation, the situation where many of these devices are typically used, these limitations can be life threatening.

21. Furthermore, in embodiments where the barrel nut is flat and the device is used in conjunction with a sight, such as the embodiment shown in U.S. Pat. No. 6,499,245 (Swan), the barrel nut must be aligned so that the flat portion fits below the scope, which would be connected to the rail or Picatinni rail, which extends along the top portion of the yoke. To restore proper alignment of all of the pieces, the device must often be taken to a gunsmith who would have to re-sight the gun and make other modifications and adjustments to these various pieces of

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hardware so as to properly align the device. This configuration also means that prior art barrel nuts cannot be interchanged because the position of the barrel is dependent upon the specific positioning of the barrel nut that corresponds to that gun.

22. The present invention overcomes these problems. The three piece connection system of the present invention replaces the single one piece barrel nut that is found in the prior art.

23. The three independent pieces in the present invention each have a separate function. The barrel nut of the present invention holds the barrel in the correct and desired position against the upper receiver of the gun. The support ring holds the gas tube in a desired position. Because the support ring is not connected to the barrel nut but is independently positioned upon the barrel nut the appropriate tension of the barrel nut may be obtained independent of the position of the gas tube. Thus the number of positions in which the device can be tensioned is infinite. The prior art does not teach this feature. The lock nut holds the support ring in place and prevents the support ring from moving out of the desired alignment.

24. The key novel feature of the present invention lies in the independent connection and potential independent alignment of each of these various features. This allows the present invention to be simply placed and adjusted according to the needs of the user.

25. The present invention allows a gas tube to be aligned and stabilized without having to over torque the barrel nut. This provides a user with the ability to tighten the device only to the level wherein the connection sleeves and the locking devices tightly hold the barrel in place. The independent positioning of the gas tube stabilizing device, and the absence of a gas-tube positioning gasp in the locking device allows this to take place.

26. Another advantage of the present invention is that the barrel nuts are interchangeable between various rifles. This is a distinct advantage over the prior art, which requires that specific barrel nuts be selected and formed by a gunsmith for a particular firearm. Since a gas tube stabilizing device is configured to be generally independent from the connection sleeve and the locking devices, as long the threads on the connection sleeve are configured to connect with the upper receiver portion of the firearm and the threads of the locking device are configured to connect with the connection sleeve, the barrel nut combinations are completely interchangeable.

27. Another advantage of the present invention over the prior art is that the appropriate torque upon the locking device and the connection device does not require any specialized tools and in a combat situation, a party may loosen and remove a barrel from a firearm, replace the barrel and continue fighting without the problems associated with the torquing that exist in the prior art.

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28. None of the prior art cited by the Examiner teaches a device that includes all of these features. Therefore, the present invention cannot be anticipated by any of these items or devices.

Conclusion

Reconsideration and allowance of the application as amended is respectfully requested.

DATED this day of

Very respectfully,

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